Mahnomen County, Minnesota

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation]

33B--Barnes loam, 2 to 6 percent slopes

Barnes

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Wind erodibility group (WEG): 6

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative :	soil profile:	Texture	Permeability	Available water capacity	рН
Ap1 () to 9 in	loam	moderate	1.63 to 2.17 in	6.1 to 7.8
Bw1 9	9 to 15 in	loam	moderate	0.89 to 1.12 in	6.1 to 7.8
Bk2,C1 15	5 to 60 in	loam	moderate	6.28 to 8.53 in	7.4 to 8.4

36--Flom silty clay loam

Drainage class: poorly drained

Flom

Extent: 90 percent of the unit

Landform(s): flats on moraines, swales on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

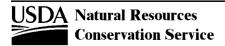
Flooding: none

Hydric soil: yes

Ponding: occasional

Hydrologic group: C/D

Representative soil profile:		Texture	Permeability	Available water capacity	рН
Ap1	0 to 10 in	silty clay loam	moderately slow	1.77 to 2.17 in	6.1 to 7.8
ABg,Bg1	10 to 20 in	clay loam	moderately slow	1.54 to 1.94 in	6.6 to 8.4
Bkg,Cg	20 to 60 in	loam	moderately slow	5.57 to 7.56 in	7.4 to 8.4



Potential for frost action: high

Mahnomen County, Minnesota

38B--Waukon loam, 2 to 8 percent slopes

Waukon

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Wind erodibility group (WEG): 5

Slope gradient: 2 to 8 percent

Wind erodibility index (WEI): 56

Parent material: till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none

Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
A1	0 to 7 in	loam	moderate	1.42 to 1.70 in	6.1 to 7.3
EBt	7 to 24 in	clay loam	moderate	2.54 to 3.22 in	6.1 to 8.4
C1 2	24 to 60 in	loam	moderate	5.37 to 6.81 in	7.4 to 8.4

38C--Waukon loam, 8 to 15 percent slopes

Waukon

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Wind erodibility group (WEG): 5

Slope gradient: 8 to 15 percent

Wind erodibility index (WEI): 56

Parent material: till

Kw factor (surface layer) .28

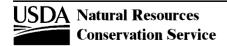
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile:		Texture	Permeability	Available water capacity	рН
A1	0 to 8 in	loam	moderate	1.57 to 1.89 in	6.1 to 7.3
EBt	8 to 23 in	clay loam	moderate	2.24 to 2.84 in	6.1 to 8.4
C1	23 to 60 in	loam	moderate	5.55 to 7.03 in	7.4 to 8.4



Mahnomen County, Minnesota

38E--Waukon loam, 15 to 30 percent slopes

Waukon

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Slope gradient: 15 to 30 percent

Wind erodibility index (WEI): 56

Parent material: till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6e

Flooding: none

Hydric soil: no

Flooding: noneHydric soil: noPonding: noneHydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
A1	0 to 4 in	loam	moderate	0.79 to 0.94 in	6.1 to 7.3
EBt	4 to 20 in	clay loam	moderate	2.42 to 3.07 in	6.1 to 8.4
C1 2	20 to 60 in	loam	moderate	5.96 to 7.56 in	7.4 to 8.4

40B--Nebish loam, 2 to 8 percent slopes

Nebish

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Slope gradient: 2 to 8 percent

Wind erodibility index (WEI): 56

Parent material: till

Kw factor (surface layer) .43

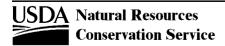
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
A,E	0 to 5 in	loam	moderate	1.02 to 1.13 in	5.6 to 7.3
Bt1,Bt2	5 to 24 in	clay loam	moderate	2.83 to 3.59 in	5.6 to 7.8
C1 :	24 to 60 in	loam	moderate	3.94 to 6.81 in	7.4 to 8.4



Mahnomen County, Minnesota

40C--Nebish loam, 8 to 15 percent slopes

Nebish

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 8 to 15 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .43
Land capability, nonirrigated 3e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Α	0 to 3 in	loam	moderate	0.63 to 0.69 in	5.6 to 7.3
E	3 to 10 in	sandy loam	moderately rapid	0.74 to 1.27 in	5.6 to 7.3
Bt1,Bt2 1	0 to 23 in	clay loam	moderate	1.95 to 2.47 in	5.6 to 7.8
C1 2	23 to 60 in	loam	moderate	4.07 to 7.03 in	7.4 to 8.4

Mahnomen County, Minnesota

40E--Nebish loam, 15 to 30 percent slopes

Nebish

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Slope gradient: 15 to 30 percent

Wind erodibility index (WEI): 56

Parent material: till

Kw factor (surface layer) .43

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil	profile:	Texture	Permeability	Available water capacity	рН
A1	0 to	2 in	loam	moderate	0.39 to 0.43 in	5.6 to 7.3
E1	2 to	6 in	fine sandy loam	moderately rapid	0.43 to 0.75 in	5.6 to 7.3
Bt1,Bt2	6 to	22 in	clay loam	moderate	2.42 to 3.07 in	5.6 to 7.8
C1 2	2 to	60 in	loam	moderate	4.16 to 7.18 in	7.4 to 8.4

59--Grimstad sandy loam

Grimstad

Extent: 90 percent of the unit

Landform(s): rises on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Slope gradient: 0 to 3 percent

Wind erodibility index (WEI): 86

Parent material: outwash over till

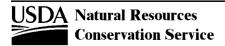
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2s

Flooding: none Hydric soil: no Ponding: none Hydrologic group: B

Drainage class: somewhat poorly drained Potential for frost action: moderate

Representative soil profile:		Texture	Permeability	capacity	рН
Ар	0 to 8 in	sandy loam	moderately rapid	1.02 to 1.42 in	7.4 to 8.4
Bk1C1	8 to 39 in	loamy fine sand	rapid	2.49 to 4.35 in	7.4 to 9.0
2C2	39 to 60 in	loam	moderate	2.30 to 3.96 in	7.4 to 9.0



Mahnomen County, Minnesota

63--Rockwell loam

Rockwell

Extent: 90 percent of the unit

Landform(s): flats on moraines, swales on moraines

Slope gradient: 0 to 1 percent

Parent material: lacustrine material over till Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: occasional

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86
Kw factor (surface layer) .24

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative so	il profile:	Texture	Permeability	Available water capacity	рН
Ap 0 to	o 9 in	loam	moderate	1.63 to 1.99 in	7.4 to 8.4
Bkg1,Bkg2 9 to	o 27 in	fine sandy loam	moderately rapid	2.66 to 3.01 in	7.9 to 8.4
2Cg1 27 to	o 34 in	sand	rapid	0.35 to 0.50 in	7.4 to 7.8
3Cg2 34 to	o 60 in	loam	moderate	4.68 to 5.72 in	7.4 to 7.8

Mahnomen County, Minnesota

121--Wykeham fine sandy loam

Wykeham

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines, rises on moraines

Slope gradient: 1 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86
Kw factor (surface layer) .17

Land capability, nonirrigated 1

Hydric soil: no

Hydrologic group: C

Potential for frost action: moderate

Representative soil profi	le: Texture	Permeability	Available water capacity	рН
A 0 to 6 in	fine sandy loam	moderately rapid	0.77 to 1.06 in	5.1 to 6.5
E 6 to 10 in	loamy fine sand	moderate	0.39 to 0.67 in	5.1 to 6.5
BE,Bt 10 to 30 in	sandy clay loam	moderate	2.41 to 3.61 in	5.6 to 7.3
BC,C 30 to 60 in	sandy loam	moderate	3.29 to 4.79 in	7.4 to 8.4

Mahnomen County, Minnesota

125--Beltrami loam

Beltrami

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines, rises on moraines

Slope gradient: 1 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .28

Land capability, nonirrigated 2e

Hydric soil: no Hydrologic group: C

Potential for frost action: high

Representative	soil	profile:	Texture	Permeability	Available water capacity	рН
Α	0 to	4 in	loam	moderate	0.79 to 0.87 in	6.1 to 7.3
E	4 to	9 in	loam	moderately rapid	0.56 to 0.97 in	5.6 to 7.3
Bt1Bt3	9 to	36 in	clay loam	moderate	4.02 to 5.09 in	5.6 to 7.8
C :	36 to	60 in	loam	moderate	3.60 to 4.56 in	7.4 to 8.4

Mahnomen County, Minnesota

127B--Sverdrup sandy loam, 1 to 6 percent slopes

Sverdrup

Extent: 90 percent of the unit Soil loss tolerance (T factor): 3 Wind erodibility group (WEG): 3

Landform(s): hillslopes on moraines, hillslopes on outwash

plains

Slope gradient: 1 to 6 percent Wind erodibility index (WEI): 86 Parent material: outwash Kw factor (surface layer) .10

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 3e

Flooding: none Hydric soil: no Ponding: none Hydrologic group: A

Drainage class: well drained Potential for frost action: low

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 10 in	sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 7.3
Bw1,2Bw2	10 to 27 in	loamy sand	moderately rapid	1.35 to 2.37 in	6.1 to 7.8
2C1.2C2	27 to 60 in	sand	rapid	0.66 to 1.98 in	7.4 to 8.4

180--Gonvick loam

Gonvick

Extent: 90 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): hillslopes on moraines, rises on moraines Wind erodibility group (WEG): 5 Slope gradient: 1 to 3 percent Wind erodibility index (WEI): 56

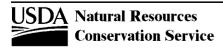
Parent material: till Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 1

Hydric soil: no Flooding: none Ponding: none Hydrologic group: C

Drainage class: moderately well drained Potential for frost action: high

Representative	e soil prof	ile:	Texture	Permeability	Available water capacity	рН
Α	0 to 10 in	loam		moderate	1.97 to 2.17 in	6.1 to 7.3
Bt1,Bt2	10 to 25 in	clay loam		moderate	2.30 to 2.92 in	6.6 to 7.3
C	25 to 60 in	loam		moderate	5.20 to 6.58 in	7.4 to 8.4



Mahnomen County, Minnesota

191--Epoufette sandy loam

Epoufette

Extent: 90 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats on outwash plains, swales on outwash Wind erodibility group (WEG): 3

plains

Slope gradient: 0 to 2 percent Wind erodibility index (WEI): 86
Parent material: outwash Kw factor (surface layer) .15

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4w

Flooding: none Hydric soil: yes
Ponding: occasional Hydrologic group: A/D

Drainage class: poorly drained Potential for frost action: high

Representative soil profile	Texture	Permeability	Available water capacity	рН
A 0 to 9 in	sandy loam	moderately rapid	0.81 to 1.27 in	6.1 to 7.3
Eg 9 to 27 in	sand	rapid	0.89 to 1.24 in	6.1 to 7.3
Btg 27 to 35 in	sandy loam	moderately rapid	0.66 to 1.16 in	6.6 to 7.8
Ca 35 to 60 in	gravelly sand	very rapid	0.25 to 0.74 in	7.4 to 8.4



Mahnomen County, Minnesota

205--Karlstad sandy loam

Karlstad

Extent: 90 percent of the unit Soil loss tolerance (T factor): 3

Landform(s): hillslopes on outwash plains, rises on outwash Wind erodibility group (WEG): 3

plains

Slope gradient: 1 to 3 percent Wind erodibility index (WEI): 86
Parent material: outwash Kw factor (surface layer) .17

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3s

Flooding: noneHydric soil: noPonding: noneHydrologic group: B

Drainage class: moderately well drained Potential for frost action: moderate

Representative soil pro	file: Texture	Permeability	Available water capacity	рН
A,E 0 to 11 i	n sandy loam	moderately rapid	1.43 to 1.98 in	4.5 to 7.3
Bt1 11 to 20 in	n sandy loam	moderately rapid	1.18 to 1.63 in	6.1 to 7.3
2Bt2 20 to 25 ii	n gravelly sandy loam	moderately rapid	0.61 to 0.82 in	6.1 to 7.8
2C 25 to 60 ii	n stratified gravelly coarse sand to loamy fine sand	very rapid	0.69 to 1.39 in	7.4 to 8.4

Mahnomen County, Minnesota

236--Vallers silty clay loam

Vallers

Extent: 90 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats on moraines, swales on moraines

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent Wind erodibility index (WEI): 86

Parent material: lacustrine material over till Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none Hydric soil: yes
Ponding: occasional Hydrologic group: C/D

Drainage class: poorly drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	capacity	рН
Ap	0 to 9 in	silty clay loam	moderately slow	1.63 to 1.99 in	7.4 to 8.4
Bkg1	9 to 19 in	silty clay loam	moderately slow	1.48 to 1.87 in	7.4 to 8.4
Bka2.Ca	19 to 60 in	clav loam	moderately slow	6.96 to 7.78 in	7.4 to 8.4

267B--Snellman sandy loam, 2 to 8 percent slopes

Snellman

Extent:90 percent of the unitSoil loss tolerance (T factor):5Landform(s):hillslopes on morainesWind erodibility group (WEG):3Slope gradient:2 to 8 percentWind erodibility index (WEI):86Parent material:tillKw factor (surface layer).20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

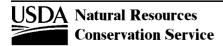
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	e soil µ	profile:	Texture	Permeability	Available water capacity	рН
Α	0 to	3 in	sandy loam	moderately rapid	0.41 to 0.57 in	5.1 to 6.5
E	3 to	12 in	sandy loam	moderate	0.78 to 1.21 in	5.1 to 6.5
Bt1,Bt2	12 to :	23 in	sandy clay loam	moderate	1.32 to 1.98 in	5.6 to 7.3
C	23 to	60 in	sandy loam	moderate	4.07 to 5.92 in	7.4 to 8.4



Mahnomen County, Minnesota

267C--Snellman sandy loam, 8 to 15 percent slopes

Snellman

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 8 to 15 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated 3e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative s	soil profile:	Texture	Permeability	Available water capacity	рН
A 0) to 3 in	sandy loam	moderately rapid	0.41 to 0.57 in	5.1 to 6.5
E 3	3 to 15 in	loamy sand	moderate	1.06 to 1.65 in	5.1 to 6.5
Bt1,Bt2 15	to 28 in	sandy clay loam	moderate	1.56 to 2.34 in	5.6 to 7.3
C 28	3 to 60 in	sandy loam	moderate	3.51 to 5.10 in	7.4 to 8.4

Mahnomen County, Minnesota

267E--Snellman sandy loam, 15 to 30 percent slopes

Snellman

Extent:90 percent of the unitSoil loss tolerance (T factor):5Landform(s):hillslopes on morainesWind erodibility group (WEG):3Slope gradient:15 to 30 percentWind erodibility index (WEI):86Parent material:tillKw factor (surface layer).20

Restrictive feature(s): greater than 60 inches

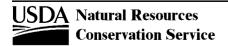
Land capability, nonirrigated 6e

Flooding: none

Hydric soil: no

Ponding: none Hydrologic group: B
Drainage class: well drained Potential for frost action: moderate

Representative	e soil	profile:	Texture	Permeability	Available water capacity	рН
A	0 to	3 in	sandy loam	moderately rapid	0.41 to 0.57 in	5.1 to 6.5
E	3 to	8 in	fine sandy loam	moderate	0.43 to 0.66 in	5.1 to 6.5
Bt1,Bt2	8 to	29 in	loam	moderate	2.55 to 3.83 in	5.6 to 7.3
C	29 to	60 in	sandy loam	moderate	3.38 to 4.91 in	7.4 to 8.4



Mahnomen County, Minnesota

290B--Rothsay silt loam, 1 to 6 percent slopes

Rothsay

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Wind erodibility group (WEG): 5

Slope gradient: 1 to 6 percent

Wind erodibility index (WEI): 56

Parent material: lacustrine material

Restrictive feature(s): greater than 60 inches

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Kw factor (surface layer) .43

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: high

Representative	soil profile:		Texture	Permeability	capacity	рН
Ap1,A2	0 to 13 in	silt loam		moderate	2.86 to 3.12 in	6.6 to 7.3
Bw 1	13 to 23 in	silt loam		moderate	1.67 to 2.17 in	6.6 to 7.8
Bk 2	23 to 35 in	silt loam		moderately rapid	2.44 to 2.69 in	7.4 to 8.4
C 3	35 to 60 in	silt loam		moderately rapid	4.96 to 5.46 in	7.4 to 8.4

296--Fram loam

Fram

Extent: 90 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): hillslopes on moraines, rises on moraines Wind erodibility group (WEG): 4L

Slope gradient: 1 to 3 percent Wind erodibility index (WEI): 86
Parent material: till Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none

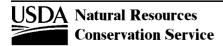
Hydric soil: no

Ponding: none

Hydrologic group: C

Drainage class: somewhat poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	capacity	рН
A 0 to 12 in	loam	moderate	2.36 to 2.83 in	7.4 to 8.4
Bk 12 to 19 in	fine sandy loam	moderate	1.13 to 1.42 in	7.4 to 8.4
C 19 to 60 in	loam	moderate	5.32 to 8.19 in	7.4 to 8.4



Available water

Mahnomen County, Minnesota

332B--Sugarbush sandy loam, 1 to 8 percent slopes

Sugarbush

Extent: 90 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): hillslopes on outwash plains, hillslopes on valley Wind erodibility group (WEG): 3

s). Hillstopes on outwash plains, Hillstopes on valley

trains

Slope gradient: 1 to 8 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3s

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: A

Drainage class: well drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Α (to 3 in	sandy loam	moderately rapid	0.41 to 0.47 in	5.6 to 7.3
E 3	3 to 9 in	loamy sand	rapid	0.53 to 0.65 in	5.6 to 7.3
Bt 9	9 to 24 in	sandy loam	moderately rapid	1.80 to 2.24 in	5.6 to 7.3
2C 24	4 to 60 in	gravelly coarse sand	very rapid	0.72 to 2.15 in	5.6 to 8.4

335--Urness mucky silt loam

Urness

Extent: 90 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): depressions on moraines, lakebeds on moraines Wind erodibility group (WEG): 4L

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 86

Parent material: lacustrine material

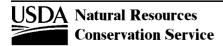
Kw factor (surface layer) .37

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 6w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: B/D

Drainage class: very poorly drained Potential for frost action: high

Representative soil profile:		Texture	Permeability	Available water capacity	рН
Α	0 to 12 in	mucky silt loam	moderate	2.13 to 2.83 in	7.4 to 8.4
Cg1Cg3	12 to 60 in	mucky silt loam	moderate	7.69 to 10.57 in	7.4 to 8.4



Mahnomen County, Minnesota

344--Quam silty clay loam

Quam

Extent: 90 percent of the unit

Landform(s): depressions on moraines

Wind erodibility group (WEG): 6

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 48

Parent material: lacustrine material over till

Kw factor (surface layer) .32

Parent material: lacustrine material over till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3w

Flooding: none

Hydric soil: yes

Ponding: frequent

Hydrologic group: C/D

Drainage class: very poorly drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 9 in	silty clay loam	moderately slow	1.63 to 1.99 in	6.6 to 7.8
A1A3	9 to 44 in	silty clay loam	moderately slow	5.61 to 7.71 in	6.6 to 7.8
2Cq1,2Cq2	44 to 60 in	clay loam	moderately slow	2.20 to 2.99 in	7.4 to 8.4

346--Talmoon loam

Talmoon

Extent: 90 percent of the unit

Landform(s): flats on moraines, swales on moraines

Wind erodibility group (WEG): 5

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 56

Parent material: till

Kw factor (surface layer) .37

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

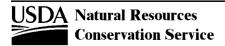
Flooding: none

Hydric soil: yes

Ponding: occasional Hydrologic group: C/D

Drainage class: poorly drained Potential for frost action: high

Representative soil pro	ofile:	Texture	Permeability	Available water capacity	рН
A 0 to 5 in	n loam		moderate	1.02 to 1.13 in	5.1 to 7.3
E 5 to 13	in loam		moderate	1.02 to 1.73 in	5.1 to 7.3
Btg 13 to 25	in clay loam		moderately slow	1.95 to 2.32 in	5.6 to 7.3
Cg 25 to 60	in loam		moderately slow	5.20 to 6.58 in	7.4 to 8.4



Mahnomen County, Minnesota

352B--Heimdal loam, 2 to 6 percent slopes

Heimdal

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 2 to 6 percent Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated 2e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative soil profile.	Texture	Permeability	Available water capacity	рН
Ap 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.1 to 7.3
Bw 8 to 17 in	loam	moderate	1.09 to 1.72 in	6.1 to 7.8
Bk 17 to 32 in	loam	moderate	1.65 to 2.84 in	7.4 to 8.4
C 32 to 60 in	loam	moderate	3.07 to 4.47 in	7.4 to 8.4

Mahnomen County, Minnesota

426--Foldahl sandy loam

Foldahl

Extent: 90 percent of the unit

Landform(s): rises on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Slope gradient: 0 to 3 percent

Wind erodibility index (WEI): 86

Parent material: lacustrine material over till

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	capacity	рН
Ар	0 to 8 in	sandy loam	moderately rapid	1.10 to 1.42 in	6.1 to 7.8
Bw1C1	8 to 30 in	loamy sand	rapid	1.54 to 2.65 in	6.6 to 7.8
2C2	30 to 42 in	loam	moderate	1.71 to 2.32 in	7.4 to 8.4
2C3	42 to 60 in	loam	moderate	2.48 to 3.37 in	7.4 to 8.4

494B--Darnen loam, 2 to 6 percent slopes

Darnen

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Wind erodibility group (WEG): 6

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 48

Parent material: colluvial material over till

Kw factor (surface layer) .28

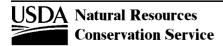
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representativ	e soil profile:	Texture	Permeability	capacity	рН
Ap,A	0 to 28 in	loam	moderate	5.03 to 5.59 in	6.6 to 7.8
Bw1,Bw2	28 to 38 in	loam	moderate	1.48 to 1.87 in	6.1 to 7.8
C	38 to 60 in	loam	moderate	3.09 to 4.19 in	7.4 to 8.4



L Available water

Mahnomen County, Minnesota

540--Seelyeville muck

Seelyeville

Extent: 90 percent of the unit Soil loss tolerance (T factor): 2

Landform(s): depressions on moraines Wind erodibility group (WEG): 2

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 134

Parent material: herbaceous organic material

Kw factor (surface layer) .02

Parent material: herbaceous organic material Kw factor (surface layer) .02

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 6w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: A/D

Drainage class: very poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Oa1 0 to 44 in	muck	moderately rapid	15.43 to 19.84 in	
Oa2,Oa3 44 to 60 in	muck	moderately rapid	5.51 to 7.09 in	

543--Markey muck

Markey

Extent: 90 percent of the unit Soil loss tolerance (T factor): 1

Landform(s): depressions on outwash plains

Wind erodibility group (WEG): 2

Slope gradient: 0 to 1 percent Wind erodibility index (WEI): 134

Parent material: organic material over outwash Kw factor (surface layer) .02

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6w

Flooding: none

Hydric soil: yes

Ponding: frequent

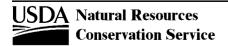
Hydrologic group: A/D

Projugge close: very peorly drained

Potential for frost action; big

Drainage class: very poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Oa1Oa3 0 to 28 in	muck	moderately rapid	9.78 to 12.58 in	
Ca1.Ca2 28 to 60 in	fine sand	rapid	0.96 to 2.55 in	



Mahnomen County, Minnesota

544--Cathro muck

Cathro

Extent: 90 percent of the unit Soil loss tolerance (T factor): 1

Landform(s): depressions on moraines Wind erodibility group (WEG): 2

Slope gradient: 0 to 1 percent Wind erodibility index (WEI): 134

Parent material: organic material over till Kw factor (surface layer) .02

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: B/D

Drainage class: very poorly drained Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Oa1	0 to 15 in	muck	moderately rapid	6.73 to 8.23 in	
Oa2 1	5 to 24 in	muck	moderately rapid	3.17 to 4.07 in	
Cq1,Cq2 2	4 to 60 in	loam	moderate	3.94 to 6.81 in	

718B--Naytahwaush loam, 2 to 8 percent slopes

Naytahwaush

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Slope gradient: 2 to 8 percent

Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

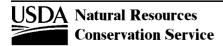
Flooding: none

Hydric soil: no

Ponding: none Hydrologic group: C

Drainage class: well drained Potential for frost action: moderate

Representative	soil	profile:	Texture	Permeability	Available water capacity	рН
A1	0 to	4 in	loam	moderate	0.79 to 0.94 in	5.6 to 7.3
E	4 to	8 in	loam	moderate	0.63 to 0.94 in	5.6 to 7.3
Bt1BC	8 to	32 in	silty clay loam	slow	2.40 to 4.56 in	6.1 to 7.8
C 3	32 to	60 in	silty clay loam	moderately slow	3.91 to 5.31 in	7.4 to 8.4



Mahnomen County, Minnesota

718C--Naytahwaush loam, 8 to 15 percent slopes

Naytahwaush

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 8 to 15 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 6 Wind erodibility index (WEI): 48 Kw factor (surface layer) .32 Land capability, nonirrigated 3e

Hydric soil: no Hydrologic group: C

Potential for frost action: moderate

Representative	soil pr	rofile:	Texture	Permeability	Available water capacity	рН
A	0 to 5	in loa	am	moderate	1.02 to 1.23 in	5.6 to 7.3
E	5 to 8	in loa	am	moderate	0.44 to 0.66 in	5.6 to 7.3
BtgBC	8 to 22	2 in cla	ay	slow	1.42 to 2.69 in	6.1 to 7.8
C 2	22 to 60) in cla	av loam	moderately slow	5.29 to 7.18 in	7.4 to 8.4

Mahnomen County, Minnesota

718E--Naytahwaush loam, 15 to 30 percent slopes

Naytahwaush

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 15 to 30 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 6 Wind erodibility index (WEI): 48 Kw factor (surface layer) .32 Land capability, nonirrigated 6e

Hydric soil: no Hydrologic group: C

Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Α	0 to 3 in	loam	moderate	0.63 to 0.76 in	5.6 to 7.3
E	3 to 6 in	loam	moderate	0.44 to 0.66 in	5.6 to 7.3
Bt1BC	6 to 20 in	clay	slow	1.42 to 2.69 in	6.1 to 7.8
C :	20 to 60 in	clav loam	moderately slow	5.57 to 7.56 in	7.4 to 8.4

Mahnomen County, Minnesota

737--Mahkonce loam

Mahkonce

Extent: 90 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): hillslopes on moraines, rises on moraines

Wind erodibility group (WEG): 6

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: D

Drainage class: moderately well drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Α	0 to 4 in	loam	moderately slow	0.67 to 0.87 in	5.6 to 7.3
E	4 to 10 in	loam	moderately slow	0.94 to 1.30 in	5.6 to 7.3
Bt1Bt3	10 to 26 in	clay	slow	2.10 to 3.07 in	6.1 to 7.3
C	26 to 60 in	clay loam	moderately slow	4.40 to 6.43 in	7.4 to 8.4

746--Haslie muck

Haslie

Extent: 90 percent of the unit Soil loss tolerance (T factor): 1

Landform(s): depressions on moraines, depressions on Wind erodibility group (WEG): 2 outwash plains

Slope gradient: 0 to 1 percent Wind erodibility index (WEI): 134

Parent material: organic material over coprogenous earth

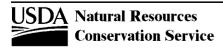
Kw factor (surface layer) .02

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 6w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: A/D

Drainage class: very poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Oa1,Oa2 0 to 42 in	muck	moderately rapid	14.74 to 20.22 in	
Cg 42 to 60 in	coprogenous earth	slow	3.19 to 4.25 in	



Mahnomen County, Minnesota

748--Hamlet loam

Hamlet

Extent: 90 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): hillslopes on moraines, rises on moraines

Wind erodibility group (WEG): 6

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .20
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2c

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: C

Drainage class: moderately well drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 12 in	loam	moderate	2.36 to 2.60 in	6.6 to 7.3
Bw1,Bw2	12 to 20 in	loam	moderate	1.24 to 1.57 in	6.6 to 7.8
Bk,C	20 to 60 in	loam	moderate	5.57 to 7.56 in	7.9 to 8.4

749--Colvin silt loam, occasionally flooded

Colvin, occasionally flooded

Extent: 90 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats on flood plains, swales on stream terraces Wind erodibility group (WEG): 4L

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .32

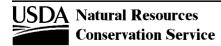
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3w

Flooding: occasional Hydric soil: yes
Ponding: occasional Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative	soil	profile:	Texture	Permeability	Available water capacity	рН
Α	0 to	9 in	silt loam	moderate	1.81 to 1.99 in	7.4 to 8.4
Bkg1,Bkg2	9 to	28 in	silt loam	moderate	3.40 to 3.97 in	7.4 to 8.4
Cg1 2	8 to	52 in	silt loam	moderate	4.08 to 4.80 in	7.4 to 8.4
Cg2 5	2 to	60 in	stratified fine sandy loam to silty clay loam	moderate	1.34 to 1.57 in	7.4 to 8.4



Mahnomen County, Minnesota

767--Auganaush loam

Auganaush

Extent: 90 percent of the unit

Landform(s): flats on moraines, swales on moraines

Slope gradient: 0 to 2 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: occasional

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .28

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Α	0 to 5 in	loam	moderate	1.02 to 1.23 in	5.6 to 7.3
E	5 to 8 in	loam	moderate	0.44 to 0.66 in	5.6 to 7.3
Btg1,Btg2	8 to 22 in	clay	slow	1.42 to 2.69 in	5.6 to 7.3
Btg3,Cg	22 to 60 in	silty clay loam	moderately slow	5.29 to 7.18 in	7.4 to 8.4

Mahnomen County, Minnesota

775B--Sugarbush-Two Inlets complex, 1 to 8 percent slopes

Sugarbush

Extent: 55 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Slope gradient: 1 to 8 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: well drained Potential for frost action: low

Representative :	soil profile:	Texture	Permeability	Available water capacity	рН
Α (0 to 4 in	sandy loam	moderately rapid	0.51 to 0.59 in	5.6 to 7.3
E 4	4 to 9 in	loamy sand	rapid	0.46 to 0.56 in	5.6 to 7.3
Bt 9	9 to 27 in	sandy loam	moderately rapid	2.13 to 2.66 in	5.6 to 7.3
2C 27	7 to 60 in	coarse sand	very rapid	0.66 to 1.98 in	5.6 to 8.4

Two Inlets

Extent: 35 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Slope gradient: 1 to 8 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: somewhat excessively drained Potential for frost action: low

Representative so	il profile:	Texture	Permeability	Available water capacity	рН
A 0 to	2 in	sandy loam	rapid	0.20 to 0.24 in	5.6 to 7.3
E 2 to	8 in	loamy coarse sand	rapid	0.53 to 0.65 in	5.6 to 7.3
Bt 8 to	27 in	coarse sand	rapid	1.70 to 2.08 in	6.1 to 7.3
C 27 to	60 in	gravelly coarse sand	very rapid	0.66 to 1.32 in	7.4 to 8.4



Mahnomen County, Minnesota

775C--Sugarbush-Two Inlets complex, 8 to 15 percent slopes

Sugarbush

Extent: 50 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Slope gradient: 8 to 15 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: well drained Potential for frost action: low

Representative soil profile:	Texture	Permeability	Available water capacity	рН
A 0 to 3 in	sandy loam	moderately rapid	0.41 to 0.47 in	5.6 to 7.3
E 3 to 10 in	loamy sand	rapid	0.60 to 0.74 in	5.6 to 7.3
Bt 10 to 27 in	sandy loam	moderately rapid	2.03 to 2.54 in	5.6 to 7.3
C 27 to 60 in	coarse sand	very rapid	0.66 to 1.98 in	5.6 to 8.4

Two Inlets

Extent: 40 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Slope gradient: 8 to 15 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .24

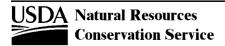
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: somewhat excessively drained Potential for frost action: low

Representative soil pro	file: Texture	Permeability	Available water capacity	рН
A 0 to 3 in	sandy loam	rapid	0.31 to 0.38 in	5.6 to 7.3
E 3 to 9 in	loamy coarse sand	rapid	0.53 to 0.65 in	5.6 to 7.3
Bt 9 to 29 i	n coarse sand	rapid	1.81 to 2.21 in	6.1 to 7.3
C 29 to 60 i	n gravelly coarse sand	very rapid	0.61 to 1.23 in	7.4 to 8.4



Mahnomen County, Minnesota

776B--Snellman-Sugarbush complex, 2 to 8 percent slopes

Snellman

Extent: 60 percent of the unitSoil loss tolerance (T factor): 5Landform(s): hillslopes on morainesWind erodibility group (WEG): 3Slope gradient: 2 to 8 percentWind erodibility index (WEI): 86Parent material: tillKw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Α	0 to 2 in	sandy loam	moderately rapid	0.26 to 0.35 in	5.1 to 6.5
E	2 to 18 in	loamy sand	moderate	1.45 to 2.26 in	5.1 to 6.5
Bt1,Bt2	18 to 33 in	sandy clay loam	moderate	1.80 to 2.69 in	5.6 to 7.3
C :	33 to 60 in	sandy loam	moderate	2.94 to 4.28 in	7.4 to 8.4

Sugarbush

Extent: 30 percent of the unit

Landform(s): hillslopes on moraines

Wind erodibility group (WEG): 3

Slope gradient: 2 to 8 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3s

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: A

Drainage class: well drained Potential for frost action: low

Representative soil profile	: Textui	Permeability	Available water capacity	рН
A 0 to 3 in	sandy loam	moderately rapid	0.41 to 0.47 in	5.6 to 7.3
E 3 to 13 in	loamy sand	rapid	0.89 to 1.08 in	5.6 to 7.3
Bt 13 to 35 in	sandy loam	moderately rapid	2.65 to 3.31 in	5.6 to 7.3
2C 35 to 60 in	sand	very rapid	0.50 to 1.49 in	5.6 to 8.4



Mahnomen County, Minnesota

776C--Snellman-Sugarbush complex, 8 to 15 percent slopes

Snellman

Extent: 55 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 8 to 15 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated 3e

Hydrologic group: B

Potential for frost action: moderate

Representative	soil	profile:	Texture	Permeability	Available water capacity	рН
Α	0 to	2 in	fine sandy loam	moderately rapid	0.26 to 0.35 in	5.1 to 6.5
E	2 to	18 in	loamy sand	moderate	1.45 to 2.26 in	5.1 to 6.5
Bt 1	8 to	26 in	sandy clay loam	moderate	0.94 to 1.42 in	5.6 to 7.3
C 2	6 to	60 in	sandy loam	moderate	3.72 to 5.42 in	7.4 to 8.4

Sugarbush

Extent: 35 percent of the unitSoil loss tolerance (T factor): 5Landform(s): hillslopes on morainesWind erodibility group (WEG): 8Slope gradient: 8 to 15 percentWind erodibility index (WEI): 86Parent material: outwashKw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches Flooding: none

Ponding: none

Drainage class: well drained

Con 1033 tolerance (1 lactor). 3
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated 4e
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	Texture	Permeability	Available water capacity	рН
A 0 to 2 in	sandy loam	moderately rapid	0.26 to 0.30 in	5.6 to 7.3
E 2 to 12 in	loamy sand	rapid	0.89 to 1.08 in	5.6 to 7.3
Bt 12 to 25 in	sandy loam	moderately rapid	1.61 to 2.01 in	5.6 to 7.3
2C 25 to 60 in	gravelly sand	very rapid	0.69 to 2.08 in	5.6 to 8.4



Mahnomen County, Minnesota

776E--Snellman-Sugarbush complex, 15 to 30 percent slopes

Snellman

Extent: 50 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 15 to 30 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated 6e

Hydrologic group: B

Potential for frost action: moderate

Available water

Representative	soil profile:	Texture	Permeability	capacity	pН
Α	0 to 2 in	sandy loam	moderately rapid	0.26 to 0.35 in	5.1 to 6.5
E :	2 to 12 in	loamy sand	moderate	0.89 to 1.38 in	5.1 to 6.5
Bt 1:	2 to 22 in	sandy clay loam	moderate	1.23 to 1.84 in	5.6 to 7.3
C 2	2 to 60 in	sandy loam	moderate	4.16 to 6.05 in	7.4 to 8.4

Sugarbush

Extent: 35 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Slope gradient: 15 to 30 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

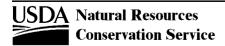
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: well drained Potential for frost action: low

Representativ	ve soil profile:	Texture	Permeability	Available water capacity	рН
Α	0 to 1 in	sandy loam	moderately rapid	0.10 to 0.12 in	5.6 to 7.3
E	1 to 9 in	loamy coarse sand	rapid	0.74 to 0.91 in	5.6 to 7.3
Bt	9 to 22 in	sandy loam	moderately rapid	1.56 to 1.95 in	5.6 to 7.3
2C	22 to 60 in	gravelly sand	very rapid	0.76 to 2.27 in	5.6 to 8.4



Mahnomen County, Minnesota

827B--Heimdal-Esmond complex, 2 to 6 percent slopes

Heimdal

Extent: 60 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 56

Extent material: till

Extent: 60 percent of the unit

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 32

Parent material: till Kw factor (surface layer) .32
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2e

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile	e: Texture	Permeability	capacity	рН
Ap 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.1 to 7.3
Bw 8 to 17 in	loam	moderate	1.09 to 1.72 in	6.1 to 7.8
Bk 17 to 30 in	loam	moderate	1.43 to 2.47 in	7.4 to 8.4
C 30 to 60 in	loam	moderate	3.29 to 4.79 in	7.4 to 8.4

Esmond

Extent: 30 percent of the unit

Landform(s): hillslopes on moraines

Wind erodibility group (WEG): 5

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 56

Parent material: till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

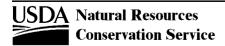
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profi	le:	Texture	Permeability	Available water capacity	рН
Ар	0 to 7 in	loam		moderate	1.42 to 1.56 in	7.4 to 8.4
Bk	7 to 13 in	loam		moderate	0.83 to 1.30 in	7.4 to 8.4
C 1	13 to 60 in	loam		moderate	5.15 to 7.50 in	7.4 to 8.4



Mahnomen County, Minnesota

827C2--Heimdal-Esmond complex, 6 to 12 percent slopes, eroded

Heimdal, eroded

Extent: 50 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 56

Parent material: till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile	e: Texture	Permeability	capacity	рН
Ap 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.1 to 7.3
Bw 8 to 15 in	loam	moderate	0.85 to 1.35 in	6.1 to 7.8
Bk 15 to 26 in	loam	moderate	1.21 to 2.09 in	7.4 to 8.4
C 26 to 60 in	loam	moderate	3.72 to 5.42 in	7.4 to 8.4

Esmond, eroded

Extent: 40 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 56

Parent material: till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 4e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	e soil	profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to	8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk	8 to	24 in	loam	moderate	2.26 to 3.55 in	7.4 to 8.4
C :	24 to	60 in	loam	moderate	3.94 to 5.73 in	7.4 to 8.4



Mahnomen County, Minnesota

867B--Graycalm-Menahga complex, 1 to 8 percent slopes

Graycalm

Extent: 55 percent of the unit

Landform(s): hillslopes on outwash plains

Wind erodibility group (WEG): 2

Wind a realibility in less (WEI): 424

Slope gradient: 1 to 8 percent

Wind erodibility index (WEI): 134

Parent material: outwash

Kw factor (surface layer) .15

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: somewhat excessively drained Potential for frost action: low

Representative soil profile:	Texture	Permeability	capacity	pН
A 0 to 2 in	loamy sand	rapid	0.12 to 0.24 in	3.5 to 6.5
Bw,E 2 to 18 in	sand	rapid	0.81 to 1.61 in	3.5 to 7.3
E&Bt 18 to 60 in	sand	rapid	1.67 to 3.76 in	3.5 to 7.3

Menahga

Extent: 35 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): hillslopes on outwash plains

Wind erodibility group (WEG): 2

Slope gradient: 1 to 8 percent

Wind erodibility index (WEI): 134

Parent material: outwash Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 4s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: excessively drained Potential for frost action: low

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
A,AB	0 to 8 in	loamy sand	rapid	0.79 to 0.94 in	4.5 to 6.5
Bw	8 to 22 in	loamy sand	rapid	0.71 to 0.99 in	4.5 to 6.5
C1,C2	22 to 60 in	sand	rapid	1.89 to 2.65 in	5.6 to 7.8



Mahnomen County, Minnesota

903B--Barnes-Langhei complex, 2 to 6 percent slopes

Barnes

Extent: 65 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 2 to 6 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated 2e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Available water

Representative soil profile	e: Texture	Permeability	capacity	рН
Ap 0 to 7 in	loam	moderate	1.28 to 1.70 in	6.1 to 7.8
Bw 7 to 14 in	loam	moderate	1.06 to 1.35 in	6.1 to 7.8
Bk.C 14 to 60 in	loam	moderate	6.39 to 8.68 in	7.4 to 8.4

Langhei

Extent: 25 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerand
Wind erodibility of

Texture

Slope gradient: 2 to 6 percent

Restrictive feature(s): greater than 60 inches

loam

loam

loam

Flooding: none Ponding: none

Parent material: till

Drainage class: well drained

Representative soil profile:

Ap -- 0 to 5 in

Bk -- 5 to 19 in

C -- 19 to 60 in

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated 3e
Hydric soil: no
Hydrologic group: B

 Permeability
 Available water capacity
 pH

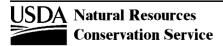
 moderate
 0.87 to 1.13 in
 6.6 to 8.4

 moderate
 2.07 to 2.62 in
 7.9 to 8.4

6.14 to 7.78 in 7.4 to 8.4

moderate

Potential for frost action: moderate



Mahnomen County, Minnesota

903C2--Barnes-Langhei complex, 6 to 12 percent slopes, eroded

Barnes, eroded

Extent: 55 percent of the unit

Landform(s): hillslopes on moraines

Solope gradient: 6 to 12 percent

Wind erodibility group
Wind erodibility index

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated 3e

Hydrologic group: B

Potential for frost action: moderate

Available water

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 6 in	loam	moderate	1.06 to 1.42 in	6.1 to 7.8
Bw	6 to 11 in	loam	moderate	0.77 to 0.97 in	6.1 to 7.8
Bk,C 1	1 to 60 in	loam	moderate	6.83 to 9.28 in	7.4 to 8.4

Langhei, eroded

Extent: 35 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): hillslopes on moraines Wind erodibility group (WEG): 4L Slope gradient: 6 to 12 percent Wind erodibility index (WEI): 86

Parent material: till Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none

Hydric soil: no

Ponding: none Hydrologic group: B
Drainage class: well drained Potential for frost action: moderate

Representative soil profil	e: Texture	Permeability	capacity	pН
Ap 0 to 4 in	loam	moderate	0.67 to 0.87 in	6.6 to 8.4
Bk 4 to 32 in	loam	moderate	4.19 to 5.31 in	7.9 to 8.4
C 32 to 60 in	loam	moderate	4.19 to 5.31 in	7.4 to 8.4



Mahnomen County, Minnesota

942D2--Langhei-Barnes complex, 12 to 20 percent slopes, eroded

Langhei, eroded

Extent: 55 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 20 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated 4e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative	e soil	profile:	Texture	Permeability	Available water capacity	рН
A	0 to	6 in	loam	moderate	1.00 to 1.30 in	6.6 to 8.4
Bk	6 to	26 in	loam	moderate	3.01 to 3.81 in	7.9 to 8.4
C 2	26 to	60 in	loam	moderate	5.08 to 6.43 in	7.4 to 8.4

Barnes, eroded

Extent: 35 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hillslopes on moraines

Wind erodibility group (WEG):

Slope gradient: 12 to 20 percent

Parent material: till

Restrictive feature(s): greater than 60 inches Flooding: none

Ponding: none

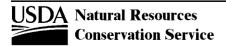
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated 4e
Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

Representative	soil pro	ofile:	Texture	Permeability	Available water capacity	рН
A	0 to 7 ir	n loam		moderate	1.28 to 1.70 in	6.1 to 7.8
Bw	7 to 13	in loam		moderate	0.89 to 1.12 in	6.1 to 7.8
Bk,C 1	3 to 60	in loam		moderate	6.56 to 8.90 in	7.4 to 8.4



Mahnomen County, Minnesota

967B--Waukon-Langhei complex, 2 to 6 percent slopes

Waukon

Extent: 65 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 56

Parent material: till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
A	0 to 6 in	loam	moderate	1.18 to 1.42 in	6.1 to 7.3
E,BE,Bt	6 to 20 in	clay loam	moderate	2.13 to 2.69 in	6.1 to 8.4
C 3	20 to 60 in	loam	moderate	5 96 to 7 56 in	7.4 to 8.4

Langhei

Extent: 25 percent of the unit

Landform(s): hillslopes on moraines

Wind erodibility group (WEG): 4L

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 86

Parent material: till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 6 in	loam	moderate	1.00 to 1.30 in	6.6 to 8.4
Bk	6 to 39 in	loam	moderate	4.96 to 6.28 in	7.9 to 8.4
C 3	39 to 60 in	loam	moderate	3.13 to 3.96 in	7.4 to 8.4



Mahnomen County, Minnesota

967C2--Waukon-Langhei complex, 6 to 12 percent slopes, eroded

Waukon, eroded

Extent: 60 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 56

Parent material: till

Ww factor (surface layer) 28

Parent material: till Kw factor (surface layer) .28
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 3e

Flooding: none

Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Α	0 to 6 in	loam	moderate	1.18 to 1.42 in	6.1 to 7.3
E,BE,Bt	6 to 15 in	clay loam	moderate	1.36 to 1.72 in	6.1 to 8.4
C 1	5 to 60 in	loam	moderate	6 73 to 8 53 in	7.4 to 8.4

Langhei, eroded

Extent: 30 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): hillslopes on moraines Wind erodibility group (WEG): 4L Slope gradient: 6 to 12 percent Wind erodibility index (WEI): 86

Parent material: till Kw factor (surface layer) .32
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 4e

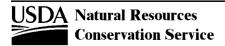
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil pro	file:	Texture	Permeability	capacity	pН
A 0 to 6 in	loam		moderate	1.00 to 1.30 in	6.6 to 8.4
Bk 6 to 19 i	n loam		moderate	1.95 to 2.47 in	7.9 to 8.4
C 19 to 60 i	n loam		moderate	6.14 to 7.78 in	7.4 to 8.4



Mahnomen County, Minnesota

979D2--Langhei-Waukon complex, 12 to 20 percent slopes, eroded

Langhei, eroded

Extent: 55 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 20 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated 4e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Wind erodibility index (WEI): 56

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
A	0 to 5 in	loam	moderate	0.87 to 1.13 in	6.6 to 8.4
Bk	5 to 28 in	loam	moderate	3.43 to 4.34 in	7.9 to 8.4
C 3	28 to 60 in	loam	moderate	4 78 to 6 06 in	7.4 to 8.4

Waukon, eroded

Extent: 35 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hillslopes on moraines

Wind erodibility group (WEG): 5

Slope gradient: 12 to 20 percent

Parent material: till Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none

Hydric soil: no

Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Α	0 to 6 in	loam	moderate	1.18 to 1.42 in	6.1 to 7.3
E,BE,Bt	6 to 14 in	clay loam	moderate	1.24 to 1.57 in	6.1 to 8.4
C	14 to 60 in	loam	moderate	6.85 to 8.68 in	7.4 to 8.4



Mahnomen County, Minnesota

1030--Pits, gravel-Udipsamments complex

Pits, gravel

Extent: 65 percent of the unit

Landform(s): moraines, outwash plains, stream terraces

Slope gradient: 1 to 50 percent

Parent material: sandy and gravelly outwash Restrictive feature(s): greater than 60 inches

Flooding: Ponding:

Drainage class:

Hydrologic group:

Potential for frost:

Hydric soil:

Potential for frost action:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Land capability, nonirrigated

Kw factor (surface layer)

Representative soil profile: Texture

e Permeability

Available water capacity

На

Udipsamments

Extent: 35 percent of the unit

Landform(s): moraines, outwash plains, stream terraces

Slope gradient: 1 to 50 percent

Parent material: sandy and gravelly outwash Restrictive feature(s): greater than 60 inches

Flooding:

Ponding:

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220 Kw factor (surface layer) .02

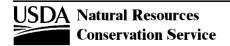
Land capability, nonirrigated 8s

Hydric soil:

Hydrologic group: A

Potential for frost action: low

Representative soil profile:	Texture	Permeability	Available water capacity	рН
A 0 to 14 in	sand	rapid	0.71 to 1.42 in	6.6 to 7.3
C1 14 to 60 in	sand	rapid	2.28 to 3.65 in	6.6 to 7.3
C2 60 to 80 in	coarse sand	very rapid	0.60 to 1.00 in	7.4 to 8.4



Mahnomen County, Minnesota

1113--Haslie, Seelyeville, and Cathro soils, ponded

Haslie, ponded

Extent: 30 percent of the unit

Landform(s): depressions on moraines, depressions on

outwash plains

Slope gradient: 0 to 1 percent

Parent material: organic material over coprogenous earth

Restrictive feature(s): greater than 60 inches

Flooding: none
Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 1

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0 Kw factor (surface layer) .02

Land capability, nonirrigated 8w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

Representative soil profile	: Texture	Permeability	Available water capacity	рН
Oa1,Oa2 0 to 30 in	muck	moderately rapid	10.47 to 14.36 in	
Ca 30 to 60 in	coprogenous earth	moderately slow	5.39 to 7.18 in	

Seelyeville, ponded

Extent: 30 percent of the unit

Landform(s): depressions on moraines, depressions on

outwash plains

Slope gradient: 0 to 1 percent

Parent material: herbaceous organic material Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

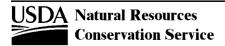
Kw factor (surface layer) .02 Land capability, nonirrigated 8w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

Representative soil pro	ofile:	Texture	Permeability	capacity	рН
Oa1 0 to 22	in muck		moderately rapid	7.72 to 9.92 in	
Oa2,Oa3 22 to 60	in muck		moderately rapid	13.23 to 17.01 in	



Mahnomen County, Minnesota

1113--Haslie, Seelyeville, and Cathro soils, ponded

Cathro, ponded

Extent: 30 percent of the unit Soil loss tolerance (T factor): 1

Landform(s): depressions on moraines, depressions on wind erodibility group (WEG): 8 outwash plains

Slope gradient: 0 to 1 percent Wind erodibility index (WEI): 0

Parent material: organic material over till Kw factor (surface layer) .02

Restrictive feature(s): greater than 60 inches

Kw factor (surface layer) .02

Land capability, nonirrigated 8w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: C/D

Drainage class: very poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Oa1,Oa2 0 to 37 in	muck	moderately rapid	16.65 to 20.35 in	
Cg1,Cg2 37 to 60 in	clay loam	slow	2.51 to 5.02 in	

1117--Hedman loam

Hedman

Extent: 90 percent of the unit

Landform(s): flats on moraines, swales on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: till Wind erodibility index (WEI): 86

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

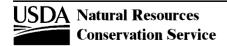
Flooding: none

Hydric soil: yes

Ponding: occasional Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
A	0 to 12 in	loam	moderate	2.36 to 2.60 in	6.6 to 7.8
Bkg1,Bkg2	12 to 21 in	loam	moderate	1.09 to 1.72 in	7.4 to 8.4
Cg1,Cg2	21 to 60 in	loam	moderate	4.29 to 7.41 in	7.4 to 8.4



Mahnomen County, Minnesota

1139--Marysland loam, occasionally flooded

Marysland, occasionally flooded

Extent: 90 percent of the unit

Landform(s): flats on flood plains, swales on stream terraces

Slope gradient: 0 to 1 percent Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: occasional Ponding: occasional

Drainage class: poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated 3w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative s	oil	profile:	Texture	Permeability	Available water capacity	рН
Ap 0	to	8 in	loam	moderate	1.34 to 1.73 in	7.4 to 8.4
Ak 8	to	16 in	loam	moderate	1.32 to 1.74 in	7.9 to 8.4
Bkg1,Bkg2 16	to	33 in	loam	moderate	2.71 to 3.56 in	7.4 to 8.4
2Cg1,2Cg2 33	to	60 in	stratified coarse sand to loamy fine sand	rapid	0.80 to 2.14 in	7.4 to 8.4

Mahnomen County, Minnesota

1142--Hedman-Fram complex

Hedman

Extent: 50 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): flats on moraines, swales on moraines

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Farent material: till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none Hydric soil: yes
Ponding: occasional Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative so	oil profile:	Texture	Permeability	Available water capacity	рН
A 0	to 13 in	loam	moderate	2.60 to 2.86 in	6.6 to 7.8
Bkg1,Bkg2 13	to 21 in	fine sandy loam	moderate	0.94 to 1.50 in	7.4 to 8.4
Ca1 Ca2 21	to 60 in	loam	moderate	4 20 to 7 41 in	7.4 to 8.4

Fram

Extent: 40 percent of the unit

Landform(s): rises on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 86

Parent material: till Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

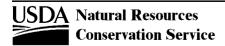
Flooding: none

Hydric soil: no

Ponding: none Hydrologic group: B/D

Drainage class: somewhat poorly drained Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
A	0 to 12 in	loam	moderate	2.36 to 2.83 in	7.4 to 8.4
Bk ′	12 to 19 in	fine sandy loam	moderate	1.13 to 1.42 in	7.4 to 8.4
C ′	19 to 60 in	loam	moderate	5.32 to 8.19 in	7.4 to 8.4



Mahnomen County, Minnesota

1147--Fordum, Fairdale, and Lamoure soils, frequently flooded

Fordum, frequently flooded

Extent: 30 percent of the unit Soil loss tolerance (T factor): 3

Landform(s): flats on flood plains, swales on flood plains

Wind erodibility group (WEG): 5

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 56

Parent material: alluvium

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 5w

Flooding: frequent

Ponding: occasional

Hydric soil: yes

Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representativ	ve soil profile:	Texture	Permeability	Available water capacity	рН
Α	0 to 9 in	loam	moderate	1.54 to 2.17 in	4.5 to 8.4
Cg1	9 to 25 in	very fine sandy loam	moderately rapid	1.61 to 3.55 in	4.5 to 8.4
Cg2,Cg3,Cg4 -	25 to 60 in	stratified sand to fine sandy loam	rapid	1.39 to 3.46 in	5.6 to 8.4
_					

Fairdale, frequently flooded

Extent: 30 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats on flood plains, rises on flood plains

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 3 percent

Wind erodibility index (WEI): 86

Parent material: alluvium Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 5w

Flooding: frequent

Hydric soil: no

Ponding: none Hydrologic group: C

Drainage class: moderately well drained Potential for frost action: moderate

Representative s	oil profile:	Texture	Permeability	capacity	рН
A 0	to 8 in	silt loam	moderate	1.57 to 1.89 in	7.4 to 7.8
C1C6 8	to 60 in	stratified very fine sandy loam to	moderate	8.83 to 11.95 in	7.4 to 8.4



Mahnomen County, Minnesota

1147--Fordum, Fairdale, and Lamoure soils, frequently flooded

Lamoure, frequently flooded

Extent: 25 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats on flood plains, swales on flood plains

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .24

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Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 5w

Flooding: frequent

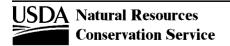
Hydric soil: yes

Ponding: occasional

Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
A1,A2,A3	0 to 25 in	silty clay loam	moderate	4.79 to 5.54 in	7.4 to 8.4
Cg	25 to 38 in	silty clay loam	moderate	2.14 to 2.52 in	7.4 to 8.4
Ab,C'g	38 to 60 in	silty clay loam	moderate	3.75 to 4.41 in	7.4 to 8.4



Mahnomen County, Minnesota

1148--Fairdale and Lamoure soils, occasionally flooded

Fairdale, occasionally flooded

Extent: 45 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): flats on flood plains, rises on flood plains

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 3 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: occasional Hydric soil: no
Ponding: none Hydrologic group: C

Drainage class: moderately well drained Potential for frost action: moderate

Representative	e soil	profile:	Texture	Permeability	Available water capacity	рН
Α	0 to	14 in	loam	moderate	2.83 to 3.40 in	7.4 to 7.8
C1C6	14 to	60 in	stratified very fine sandy loam to silty clay loam	moderate	7.76 to 10.50 in	7.4 to 8.4

Lamoure, occasionally flooded

Extent: 45 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats on flood plains, swales on flood plains

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4w

Flooding: occasional

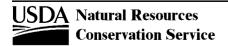
Hydric soil: yes

Ponding: occasional

Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
A1,A2,A3 0 to 31 in	silty clay loam	moderate	5.91 to 6.84 in	7.4 to 8.4
Cg 31 to 44 in	silt loam	moderate	2.21 to 2.60 in	7.4 to 8.4
Ab,C'g 44 to 60 in	stratified sandy loam to silty clay	moderate	1.42 to 2.83 in	7.4 to 8.4



Mahnomen County, Minnesota

1149--Hamerly clay loam

Hamerly

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines, rises on moraines

Slope gradient: 1 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86

Kw factor (surface layer) .24 Land capability, nonirrigated 2s

Hydrologic group: C

Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 9 in	clay loam	moderate	1.54 to 1.99 in	6.6 to 8.4
ABk,Bk	9 to 23 in	loam	moderate	2.07 to 2.62 in	7.4 to 8.4
C1,C2	23 to 60 in	loam	moderately slow	5.18 to 7.03 in	7.4 to 8.4

Mahnomen County, Minnesota

1152B--Sugarbush loamy sand, 1 to 8 percent slopes

Sugarbush

Soil loss tolerance (T factor): 5 Extent: 90 percent of the unit Wind erodibility group (WEG): 2

Landform(s): hillslopes on outwash plains, hillslopes on valley

trains

Wind erodibility index (WEI): 134 Slope gradient: 1 to 8 percent Parent material: outwash Kw factor (surface layer) .10 Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 3s

Flooding: none Hydric soil: no Hydrologic group: A Ponding: none

Drainage class: well drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Α	0 to 4 in	loamy sand	rapid	0.39 to 0.47 in	5.6 to 7.3
E	4 to 7 in	loamy sand	rapid	0.28 to 0.35 in	5.6 to 7.3
Bt	7 to 22 in	sandy loam	moderately rapid	1.80 to 2.24 in	5.6 to 7.3
2C 2	2 to 60 in	gravelly coarse sand	very rapid	0.76 to 2.27 in	5.6 to 8.4



Mahnomen County, Minnesota

1152C--Sugarbush loamy sand, 8 to 15 percent slopes

Sugarbush

Ponding: none

Soil loss tolerance (T factor): 5 Extent: 90 percent of the unit Wind erodibility group (WEG): 2

Landform(s): hillslopes on outwash plains, hillslopes on valley

trains

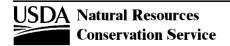
Slope gradient: 8 to 15 percent Wind erodibility index (WEI): 134 Parent material: outwash Kw factor (surface layer) .10 Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 4e

Hydrologic group: A

Flooding: none Hydric soil: no

Drainage class: well drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
A	0 to 5 in	loamy sand	rapid	0.51 to 0.61 in	5.6 to 7.3
E	5 to 8 in	loamy sand	rapid	0.25 to 0.30 in	5.6 to 7.3
Bt	8 to 16 in	sandy loam	moderately rapid	0.99 to 1.24 in	5.6 to 7.3
2C 1	16 to 60 in	gravelly sand	verv rapid	0.87 to 2.62 in	5.6 to 8.4



Mahnomen County, Minnesota

1152E--Sugarbush loamy sand, 15 to 30 percent slopes

Sugarbush

Soil loss tolerance (T factor): 5 Extent: 90 percent of the unit Wind erodibility group (WEG): 2

Landform(s): hillslopes on outwash plains, hillslopes on valley

trains

Wind erodibility index (WEI): 134 Slope gradient: 15 to 30 percent Parent material: outwash Kw factor (surface layer) .10 Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 6e

Flooding: none Hydric soil: no

Hydrologic group: A Ponding: none

Drainage class: well drained Potential for frost action: low

Representative :	soil profile:	Texture	Permeability	Available water capacity	рН
A 0) to 2 in	loamy sand	rapid	0.20 to 0.24 in	5.6 to 7.3
E 2	2 to 12 in	loamy sand	rapid	0.89 to 1.08 in	5.6 to 7.3
Bt 12	2 to 23 in	sandy loam	moderately rapid	1.32 to 1.65 in	5.6 to 7.3
2C 23	3 to 60 in	coarse sand	very rapid	0.74 to 2.22 in	5.6 to 8.4



Mahnomen County, Minnesota

1200--Egglake loam

Egglake

Extent: 90 percent of the unit

Landform(s): flats on moraines, swales on moraines

Slope gradient: 0 to 2 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: occasional

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .32

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
A 0 to 4 in	loam	moderately rapid	0.39 to 0.83 in	5.6 to 7.3
E 4 to 10 in	fine sandy loam	moderately rapid	0.71 to 0.83 in	5.6 to 7.3
Btg 10 to 28 in	sandy clay loam	moderate	2.90 to 3.26 in	5.6 to 7.3
Cg 28 to 60 in	sandy loam	moderate	3.51 to 4.15 in	7.4 to 8.4

Mahnomen County, Minnesota

1233D2--Esmond-Heimdal complex, 12 to 20 percent slopes, eroded

Esmond, eroded

Extent: 60 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 20 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated 4e

Hydrologic group: B

Potential for frost action: moderate

Wind erodibility index (WEI): 56

Available water

Representative soil profile:		Texture	Permeability	capacity	рН
Ар	0 to 5 in	loam	moderate	1.02 to 1.13 in	7.4 to 8.4
Bk	5 to 22 in	loam	moderate	2.37 to 3.72 in	7.4 to 8.4
C 2	22 to 60 in	loam	moderate	4.16 to 6.05 in	7.4 to 8.4

Heimdal, eroded

Extent: 30 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hillslopes on moraines

Wind erodibility group (WEG): 5

Slope gradient: 12 to 20 percent

Parent material: till Kw factor (surface layer) .32
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 4e

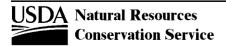
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative se	oil profile:	Texture	Permeability	Available water capacity	рН
Ap 0	to 5 in	loam	moderate	1.02 to 1.13 in	6.1 to 7.3
Bw 5	to 11 in	loam	moderate	0.71 to 1.12 in	6.1 to 7.8
Bk 11	to 28 in	loam	moderate	1.86 to 3.22 in	7.4 to 8.4
C 28	to 60 in	loam	moderate	3.51 to 5.10 in	7.4 to 8.4



Mahnomen County, Minnesota

1238E--Two Inlets-Sugarbush complex, 15 to 30 percent slopes

Two Inlets

Extent: 55 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Slope gradient: 15 to 30 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: somewhat excessively drained Potential for frost action: low

Representative soil profile:		Texture	Permeability	capacity	рН
A 0 to	2 in	sandy loam	rapid	0.20 to 0.24 in	5.6 to 7.3
E 2 to	11 in	loamy sand	rapid	0.81 to 1.00 in	5.6 to 7.3
Bt 11 to	29 in	loamy sand	rapid	1.63 to 1.99 in	6.1 to 7.3
C 29 to	60 in	gravelly coarse sand	very rapid	0.61 to 1.23 in	7.4 to 8.4

Sugarbush

Extent: 35 percent of the unit

Landform(s): hillslopes on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Slope gradient: 15 to 30 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .15

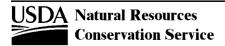
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: well drained Potential for frost action: low

Representative soil profit	le: Texture	Permeability	Available water capacity	рН
A 0 to 2 in	coarse sandy loam	moderately rapid	0.26 to 0.30 in	5.6 to 7.3
E 2 to 9 in	loamy coarse sand	rapid	0.64 to 0.78 in	5.6 to 7.3
Bt 9 to 28 in	coarse sandy loam	moderately rapid	2.27 to 2.83 in	5.6 to 7.3
C 28 to 60 in	coarse sand	very rapid	0.64 to 1.91 in	5.6 to 8.4



Mahnomen County, Minnesota

1241B--Sandberg sandy loam, 1 to 6 percent slopes

Sandberg

Extent: 90 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): hillslopes on moraines, hillslopes on outwash Wind erodibility group (WEG): 3

plains

Slope gradient: 1 to 6 percent Wind erodibility index (WEI): 86

Parent material: outwash Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4s

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: A

Drainage class: excessively drained Potential for frost action: low

Representative soil profile	Texture	Permeability	capacity	pН
A 0 to 10 in	sandy loam	moderately rapid	1.28 to 1.48 in	5.6 to 7.8
Bt 10 to 16 in	gravelly loamy sand	rapid	0.19 to 0.63 in	6.1 to 7.8
C 16 to 60 in	gravelly sand	very rapid	0.87 to 2.62 in	7.4 to 8.4

1356--Water, miscellaneous

Water, miscellaneous

Extent: 100 percent of the unit Soil loss tolerance (T factor):

Landform(s):Wind erodibility group (WEG):Slope gradient:Wind erodibility index (WEI):Parent material:Kw factor (surface layer)Restrictive feature(s):greater than 60 inches

Flooding: Hydric soil:

Ponding: Hydrologic group:

Drainage class: Potential for frost action:

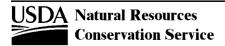
Representative soil profile:

Texture

Permeability

Available water capacity

pH



Mahnomen County, Minnesota

1804--Hamre muck, ponded

Hamre, ponded

Extent: 90 percent of the unit Soil loss tolerance (T factor): 1

Landform(s): depressions on moraines

Wind erodibility group (WEG): 8

Slope gradient: 0 to 1 percent Wind erodibility index (WEI): 0

Parent material: organic material and till Kw factor (surface layer) .02

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 8w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: B/D

Drainage class: very poorly drained Potential for frost action: high

Representative soil pro	ofile:	Texture	Permeability	Available water capacity	рН
Oa 0 to 14	in muck		moderate	4.96 to 6.80 in	5.1 to 7.8
A 14 to 28	in silt loam		moderate	2.34 to 2.62 in	5.1 to 7.8
C 28 to 60 i	in loam		moderate	5.42 to 6.06 in	7.4 to 8.4

1825B--Seelyeville muck, sloping, seep land

Seelyeville, sloping, seep land

Extent: 90 percent of the unit Soil loss tolerance (T factor): 2

Landform(s): fens on moraines, fens on outwash plains

Wind erodibility group (WEG): 8

Slope gradient: 1 to 10 percent

Wind erodibility index (WEI): 0

Parent material: herbaceous organic material

Kw factor (surface layer) .02

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 7w

Flooding: none

Hydric soil: yes

Ponding: rare Hydrologic group: A/D

Drainage class: very poorly drained Potential for frost action: high

Representative soil profile:

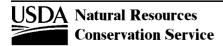
Texture

Permeability

Available water capacity

pH

Oa1..Oa3 -- 0 to 60 in muck moderately rapid 20.94 to 26.93 in



Mahnomen County, Minnesota

1878--Hamre muck

Hamre

Extent: 90 percent of the unit Soil loss tolerance (T factor): 1

Landform(s): depressions on moraines

Wind erodibility group (WEG): 2

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 134

Parent material: organic material and till

Kw factor (surface layer) .02

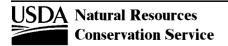
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: B/D

Drainage class: very poorly drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Oa1	0 to 11 in	muck	moderate	3.86 to 5.29 in	5.1 to 7.8
A	11 to 22 in	clay loam	moderate	1.87 to 2.09 in	5.1 to 7.8
C	22 to 60 in	clay loam	moderate	6.43 to 7.18 in	7.4 to 8.4



Mahnomen County, Minnesota

1967--Hamerly-Vallers complex

Hamerly

Extent: 55 percent of the unit

Landform(s): rises on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 86

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2s

Flooding: none Hydric soil: no

Ponding: none Hydrologic group: C/D

Drainage class: somewhat poorly drained Potential for frost action: high

Available water Texture Permeability Ηα Representative soil profile: capacity A --0 to 9 in clav loam moderate 1.54 to 1.99 in 6.6 to 8.4 Bk -- 9 to 13 in clay loam moderate 0.59 to 0.75 in 7.4 to 8.4 C -- 13 to 60 in clay loam moderately slow 6.56 to 8.90 in 7.4 to 8.4

Vallers

Extent: 35 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats on moraines, swales on moraines Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent Wind erodibility index (WEI): 86

Parent material: till Kw factor (surface layer) .32
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2w

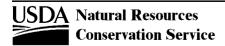
Flooding: none

Hydric soil: yes

Ponding: occasional Hydrologic group: C/D

Drainage class: poorly drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 7 in	silty clay loam	moderately slow	1.28 to 1.56 in	7.4 to 8.4
Bk	7 to 20 in	silty clay loam	moderately slow	1.95 to 2.47 in	7.4 to 8.4
C 2	20 to 60 in	clay loam	moderately slow	6.76 to 7.56 in	7.4 to 8.4



Mahnomen County, Minnesota

W--Water

Water

Extent: 100 percent of the unit Soil loss tolerance (T factor):

Landform(s): Wind erodibility group (WEG):
Slope gradient: Wind erodibility index (WEI):
Parent material: Kw factor (surface layer)

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated

Flooding: Hydric soil:
Ponding: Hydrologic group:

Drainage class: Potential for frost action:

Representative soil profile:

Texture

Permeability

Available water capacity

pH

This report provides a semitabular listing of some soil and site properties and interpretations that are valuable in communicating the concept of a map unit. The report also provides easy access to the commonly used conservation planning information in one place. The major soil components in each map unit are displayed. Minor components may be displayed if they are included in the database and are selected at the time the report is generated.

